CONTENTS

Number 1

	1	**Cooperating Organizations**
Colin Kirkland	3	**Editorial — The Importance of the Human Factor in Managing Underground Projects**
	7	**Interview with Dr. Goichi Fukuchi**
ITA Working Group on Maintenance and Repair of Underground Structures	11	**Report on the Damaging Effects of Water on Tunnels During Their Working Life**
Sir Alan Muir Wood	77	**The Channel Tunnel — View of a Teredo**
Daniel J. Boivin	83	**Montreal's Underground Network: A Study of the Downtown Pedestrian System**
Elias Sahab Haddad	93	**The Cutzamala Water Supply System Serves the Growing Needs of Mexico City's Metropolitan Area**
Willy Meyeroltmanns	97	**The Influence of Decreasing Vehicle Exhaust Emissions on the Standards for Ventilation Systems for Urban Road Tunnels**
P. Sobotka, L. L. Boyer, Z. Izakovičová, and M. Moyzeová	103	**Methodology for Evaluating a Nation's Urban Space Needs: A Case Study of Slovakia**
Allen Neyland	113	**Australia's Tunnelled Infrastructure: Current Trends and Projects**
Ulrika Hamberger	119	**Case History: Blowout at an LPG Storage Cavern in Sweden**
F. El-Nahhas, F. El-Kadi and A. Shalaby	123	**Field Measurements During Construction of a Compressed Air Tunnel in Cairo**
	129	**News and Comment**
	133	**Meetings**
	137	**Publications**
	139	**ITA News**
	156	**News from Cooperating Organizations**

Number 2

	163	**Cooperating Organizations**
Michael Barker	165	**Editorial — An ITA Study Identifies Legal and Administrative Barriers to Underground Space Use**

	166	**Letters from Our Readers**
Z. Eisenstein	167	**The Future of Mechanized Tunnelling: Introduction to the ITA Open Session at the Toronto Congress 1989**
Siegmund Babendererde	169	**Tunnelling Machines in Soft Ground: a Comparison of Slurry and EPB Shield Systems**
G. Fukuchi	175	**The Present and Future of Mechanized Tunnel Works in Soft Ground**
Sebastiano Pelizza	185	**Pilot Bore Excavation with TBM for the Design and Construction of Larger Tunnels**
ITA Working Group on Subsurface Planning	191	**Legal and Administrative Issues in Underground Space Use: a Preliminary Survey of ITA Member Nations**
A. M. Neilson	211	**Sydney Harbour Tunnel — Why?**
D. F. Cunneen	215	**Sydney Harbour Tunnel — Environmental Planning and Control**
L. Gomes	221	**Sydney Harbour Tunnel — Structure of the Immersed Tube Section**
D. A. Baxter, J. A. Hilton and E. J. Nye	227	**Sydney Harbour Tunnel — Driven and Cut-and-Cover Tunnels**
Sveinn Thorgrímsson, Matthías Loftsson and Ólafur Jensson	235	**Iceland's Blanda Hydroelectric Project: Monitoring of Deformations, Rock Support and Testing of Rock Anchors in the Powerhouse Cavern**
Donna Ahrens	241	**ITA Open Session Focuses on Management of Underground Works**
	247	**News and Comment**
	250	**Meetings**
	253	**Publications**
	255	**ITA News**
	263	**News from Cooperating Organizations**

Number 3

	269	**Cooperating Organizations**
Donna Ahrens	271	**Technology Transfer: International Activities and Opportunities**
A. Haack	273	**Water Leakages in Subsurface Facilities: Required Watertightness, Contractual Matters, and Methods of Redevelopment**
The Underground Technology Research Council	283	**Potential Topics for Research and Development in Underground Engineering**
K. Y. Lo and J. A. Ramsay	287	**The Effect of Construction on Existing Subway Tunnels—a Case Study from Toronto**
Società Italiana Gallerie	299	**Tunnelling in Italy: 1990**
A. Hakimi	317	**Introduction to a Seminar on Underground Studies**
M. Taik and J. M. Serrano	319	**A Tunnel Project under the Straits of Gibraltar**

A. El Ghorfi and M. Giafferi	325	**Problems Posed to a Moroccan Hydroelectric Facility Inlet Tunnel by the Presence of Gypsum**
M. Naciri, M. Taj and M. Khaddour	337	**Experience of the Moroccan National Railways in Reinforcement of "Short" Tunnels**
Z. Eisenstein and P. Branco	343	**Convergence–Confinement Method in Shallow Tunnels**
	347	**News and Comment**
	357	**Meetings**
	361	**ITA News**
	372	**News from Cooperating Organizations**

Number 4

	379	**Cooperating Organizations**
Gary S. Brierley	381	**The American Scene: Looking Forward**
Association Française des Travaux en Souterrain	383	**Recommendations on Grouting for Underground Works**
Göran Bäckblom	463	**The Äspö Hard Rock Laboratory — a Step Toward the Swedish Final Repository for High-Level Radioactive Waste**
A. J. Howard	469	***Request for Information*: ITA Study of Non-Destructive Methods of Inspecting and Testing Tunnel Linings**
ITA Working Group on Subsurface Planning	471	**Policy Statement on Legal and Administrative Issues in Underground Space Use**
	473	**News and Comment**
	478	**Meetings**
	482	**Publications**
	484	**ITA News**
	492	**News from Cooperating Organizations**
	i	**Volume 6 Title Section, Contents and Author Index**